

WHAT IS CLAIMED:

1. A crop picking head assembly for mounting in a crop harvester framework configured to travel along an extended row of plant foliage to dislodge a crop growing
5 along the row, comprising

an oscillation generating head having an input drive member,

an oscillation generating head support frame for mounting said oscillation
generating head for rotational oscillation in a substantially vertical plane,

a pair of fixed length laterally spaced arms each mounted to the crop harvester
10 framework at an upper end and pivotally attached to said support frame at a lower end,

a pair of variable length laterally spaced arms each mounted to the crop harvester
framework at an upper end and pivotally attached to said support frame at a lower end,

crop contact means mounted on said oscillation generating head in position to
approach the plant foliage from beneath,

15 a drive motor mounted on said support frame having a motor output in
engagement with said oscillation generating head drive member and providing oscillation
generating head net rotation urging said crop contact means into the crop foliage, and

a stop member on said support frame for limiting net rotation of said oscillation
generating head in said substantially vertical plane.

20 2. The crop picking head assembly as in claim 1, wherein said crop contact means
comprises

an array of substantially parallel rods extending upwardly and rearwardly relative
to the crop harvester framework travel.

25 3. The crop picking head assembly as in claim 1, wherein said crop contact means
comprises

HMS/A0114

an array of substantially parallel loops extending upwardly and rearwardly relative to the crop harvester framework travel.

4. The crop picking head assembly as in claim 1, wherein said input drive member
5 has a substantially horizontally extending axis passing substantially through the center of mass of said oscillation generating head, and wherein said contact means comprises means for mounting said crop contacting means displaced from said horizontal axis so that an unbalance aiding said net rotation is obtained.

10 5. The crop picking head assembly as in claim 1, wherein said stop member comprises a shock absorber.

15 6. The crop picking head assembly as in claim 2, wherein the extended row of plant foliage is supported by straight cordons, and wherein said array of substantially parallel rods comprises tips on said parallel rods disposed at a substantially uniform height.

20 7. The crop picking head assembly as in claim 3, wherein said array of substantially parallel loops comprises loop free ends at a substantially uniform height.

25 8. The crop picking head assembly as in claim, wherein said crop contact means comprises a plurality of substantially parallel members extending rearwardly and upwardly in a direction diverging from said oscillation generating head.

9. A crop picking head assembly for mounting in a crop harvester framework configured to travel along an extended row of plant foliage supported on cordons to dislodge a crop growing along the row, comprising

an oscillation generating head having a centrally located input drive member,
an oscillation generating head support frame for mounting said oscillation
generating head for rotation in a substantially vertical plane,
a pair of fixed length laterally spaced arms each mounted to the crop harvester
framework at an upper end and pivotally attached to said support frame at a lower end,
a pair of variable length spaced arms each mounted to the crop harvester
framework at an upper end and pivotally attached to said support frame at a lower end,
crop contact means mounted on said oscillation generating head in position to
approach the cordons from beneath and to contact the cordons during oscillation,
a drive motor mounted on said support frame having a motor output in
engagement with said oscillation generating head input drive member and providing
oscillation generating head net rotation urging said crop contact means into the crop
foliage, and
stop means mounted on said support frame for limiting net rotation of said
oscillation generating head in said substantially vertical plane.

10. The crop picking head assembly as in claim 9, wherein said crop contact means comprises

an array of substantially parallel rods extending upwardly and rearwardly relative to the crop harvester framework travel.

11. The crop picking head assembly as in claim 9, wherein said crop contact means comprises

an array of substantially parallel loops extending upwardly and rearwardly relative to the crop harvester framework travel.

12. The crop picking head assembly as in claim 9, wherein said input drive member has a substantially horizontally extending axis passing substantially through the center of mass of said oscillation generating head, and wherein said contact means comprises

means for mounting said crop contacting means displaced from said horizontal axis so that an unbalance aiding said net rotation is obtained.

13. The crop picking head assembly as in claim 9, wherein said stop member comprises

a shock absorber.

14. The crop picking head assembly as in claim 10, wherein the cordons are straight cordons, and wherein said array of substantially parallel rods comprises, tips on said parallel rods disposed at a substantially uniform height.

15. The crop picking head assembly as in claim 11, wherein the cordons are straight cordons, and wherein said array of substantially parallel rods comprises loop ends at a substantially uniform height.

16. The crop picking head assembly as in claim 9, wherein said crop contact means comprises

a plurality of substantially parallel members extending rearwardly and upwardly in a direction diverging from said oscillation generating head.

17. The crop picking head assembly as in claim 10, wherein the cordons are "V"
shaped cordons, and wherein said array of substantially parallel rods comprises
tips on said substantially parallel rods at similar distances from one side of said
"V".

5 18. A harvester for crops grown on plant foliage in an extended row and
supported on cordons along the row, comprising
a harvester framework having a longitudinal center line,
means for supporting said harvester framework and for contacting and affording
10 harvester framework movement along said centerline over an underlying surface,
power means coupled to said means for supporting for moving said harvester
framework over the underlying surface,

a crop picking head mounted on said harvester framework on one side of said
centerline so that said picking head is positionable on one side of the extended row and
15 below the cordons, said crop picking head comprising

an oscillation generating head having an input drive member,
an oscillation generating head support frame for mounting said oscillation
generating head for rotational oscillation in a substantially vertical plane,
a pair of fixed length laterally spaced arms each mounted to the crop harvester
20 framework at an upper end and pivotally attached to said support frame at a lower end,
a pair of variable length laterally spaced arms each mounted to the crop harvester
framework at an upper end and pivotally attached to said support frame at a lower end,
crop contact means mounted on said oscillation generating head in position to
approach the plant foliage from beneath,
25 a drive motor connected to said power means mounted on said support frame and
having a motor output in engagement with said oscillation generating head drive member

and providing net rotation of said oscillation generating head urging said crop contact means into the crop foliage, and

stop means mounted on said support frame for limiting net rotation of said oscillation generating head in said substantially vertical plane.

5

19. The harvester as in claim 18, wherein said crop contact means comprises an array of substantially parallel rods extending upwardly and rearwardly relative to the crop harvester framework travel.

10

20. The harvester as in claim 18, wherein said crop contact means comprises an array of substantially parallel loops extending upwardly and rearwardly relative to the crop harvester framework travel.

15

21. The harvester as in claim 19, wherein said input drive member has a substantially horizontally extending axis passing substantially through the center of mass of said oscillation generating head and wherein said contact means comprises means for mounting said crop contacting means displaced from said horizontal axis so that an unbalance aiding said net rotation is obtained.

20

22. The harvester as in claim 18, wherein said stop member comprises a shock absorber.

25

23. The harvester as in claim 19, wherein the cordons are straight cordons, and wherein said array of substantially parallel rods comprises tips on said parallel rods disposed at a substantially uniform height.

24. The harvester as in claim 20, wherein the cordons are straight cordons, and wherein said array of substantially parallel rods comprises loop ends at a substantially uniform height.

5 25. The harvester as in claim 18, wherein said crop contact means comprises a plurality of substantially parallel members extending rearwardly and upwardly in a direction diverging from said oscillation generating head.

10 26. The harvester as in claim 19, wherein the cordons are "V" shaped cordons, and wherein said array of substantially parallel rods comprises tips on said substantially parallel rods at similar distances from one side of said "V".

15 27. The harvester as in claim 18, comprising another crop picking head mounted on said harvester framework in position on the other side of said centerline so that said other picking head is positional on the other side of the extended row and below the cordons.

20 28. The harvester as in claim 27, wherein said crop picking head and said other crop picking head are spaced along said centerline.